REMARKS

Reconsideration of the application is respectfully requested.

In the subject Office Action, claims 13-15 and 27-29 have been allowed. Claims 16-18 would be allowable if re-written to overcome the rejections under 35 U.S.C. § 112, second paragraph.

Claims 1-12 and 16-26 have been rejected. The title of the application and claim 1 have been objected to. In response to the objections, claim 1 has been amended. Accordingly, claims 1-29 remain pending in the application.

Applicant appreciatively acknowledges the Examiner's allowance of claims 13-15 and 27-29, and the Examiner's consideration of Applicant's arguments submitted in the response dated August 8, 2005.

Specification

In "Specification" item 2 on page 2, the Examiner objects to the title of the application as not descriptive. The Applicant respectfully disagrees with the Examiner's analysis and submits that the title is indicative of the invention to which the claims are directed. The title, "Method and Apparatus for Protectively Operating A Data/Information Processing Device" accurately describes the invention, which offers greater protection by remapping processes to appropriate privilege levels.

Claim Objections

In "Claim Objections" item 3 on page 2, the Examiner objects to claim 1 because of an informality. In response, the Applicant has amended claim 1, making the appropriate correction suggested by the Examiner.

Claim Rejections – 35 USC § 112

In "Claim Rejections – 35 USC § 112," item 5 on page 2 of the above-identified final Office Action, claims 1-12, and 16-26 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicant respectfully disagrees with the Examiner's analysis. In item 6 on page 3, the Examiner states the "remapping can be done by the operating system in lines 5-6." Claim 1, however, does not recite remapping by an operating system but rather "a privilege remapper coupled to the control register and configured to remap a current privilege level stored in the control register for the task by the operating system, to a different current privilege level attributing a different execution privilege level to the task for the processor, the remapping being performed independent of the operating system." The action performed by the operating system in claim 1 is storing a current privilege level in the control register for a task. This action is not performed by the remapper, and does not involve it. Thus, there is no tension between the remapper performing its operations, independent of the operating system, and the operating system interacting with the control register to store a current privilege level for a task. Accordingly, Applicant submits that claims 1-12 and 16-26 are in compliance with 35 USC 112, second paragraph, and in condition for allowance.

Allowable Subject Matter

Applicant thanks the Examiner for allowing claims 13-15 and 27-29, and for finding that claims 16-18 would be allowable if rewritten to overcome the rejection under 35 U.S.C. § 112, second paragraph. As noted above, claims 16-18 are believed to comply with 35 U.S.C. §112, second paragraph. Thus, allowance of these claims is also respectfully requested.

Claim Rejections – 35 U.S.C. § 103

In "Claim Rejections – 35 USC § 103," item 11 on page 4 of the above-identified final Office Action, claims 1-12 and 19-26 have been rejected as being unpatentable over U.S. Patent No. 5,596,739 to *Kane et al.* (hereinafter "Kane") in view of U.S. Patent No. 5,864,705 to *Behnke* (hereinafter "Behnke") under 35 U.S.C. § 103(a). Applicant respectfully traverses.

To establish obviousness under 35 U.S.C. § 103, the Examiner must view the invention as a whole. Further, the Examiner is to perform the obviousness analysis in accordance with the standard set forth by the Supreme Court in *Graham v. John Deere Co.* That standard requires that the Examiner (1) determine the scope and content of the prior art; (2) ascertain the differences between the prior art and the claims in issue; (3) resolve the level of ordinary skill in the art; and (4) evaluate evidence of secondary considerations. 383 U.S. 1, 17-18 (1966); *see also* MPEP 2141. Secondary considerations include whether the invention met with commercial success, whether the invention answered a long felt need, and whether others attempting the invention have failed. *Graham*, 383 U.S. at 17-18. Further, in applying the *Graham* framework, the Examiner must consider the invention as a whole, without the benefit of hindsight. MPEP 2141.

Claim 1 recites:

"a control register accessible to an operating system to store a current privilege level to attribute an execution privilege level to a task for the processor; and

a privilege remapper coupled to the control register and configured to remap a current privilege level stored in the control register for the task by the operating system, to a different current privilege level attributing a different execution privilege level to the task for the processor, the remapping being performed independent of the operating system."

In contrast, Kane teaches a privilege level 2 task (TSK2) using an ARPL instruction, an instruction of the processor, to adjust the requested protection level (RPL) of a provided selector to match the current protection level (CPL) of a privilege level 3 task (TSK3) (see, col. 18, 52-54). Thus, the task (TSK2) and the operating system are involved in the adjustment.

Behnke teaches optimized environments for virtualizing physical subsystems independent of the operating system. Examples of physical subsystems are sound card, modem,

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graphics display (see top right corner of Fig. 3). The operating system independent virtualization is achieved through the use of system management interrupts (SMI) (21 of Fig. 3), transferring I/O operations performed by application programs (52 of Fig. 3) to virtual subsystem programs (56 of Fig. 3) to handle. As a result, the physical subsystems (sound, etc.) may be virtualized and shared among the applications, independent of the operating system.

Accordingly, Kane and Behnke at best teach or suggest to one of ordinary skill that a task of a particular privilege level may adjust the RPL of a provided selector to match the CPL of another task of another privilege level, independent of the operating system (i.e. without use of the ARPL instruction), by way of another set of instructions invoked through the use of a SMI.

Thus, in combination, Kane and Behnke still fail to suggest to one of ordinary skill in the art to couple a remapper to a control register that is used by the operating system to store a current privilege level to attribute an execution privilege to a task for the processor, to modify the stored current privilege level to attribute a different execution privilege to the task for the processor, independent of the operating system, effectively overriding the operating system. Nothing in Kane nor Behnke suggests overriding privilege levels attributed to a task by an operating system without recourse to the operating system.

Accordingly, claim 1 is not obvious in view of Kane and Behnke, and is therefore patentable over Kane and Behnke combined under § 103(a).

Each of claims 7, 19, 21, 23, and 25 include in substance of the recitations in claim 1. Accordingly, for at least the same reasons, claims 7, 19, 21, 23, and 25 are not obvious in view of Kane and Behnke, and are therefore patentable over Kane and Behnke under § 103(a).
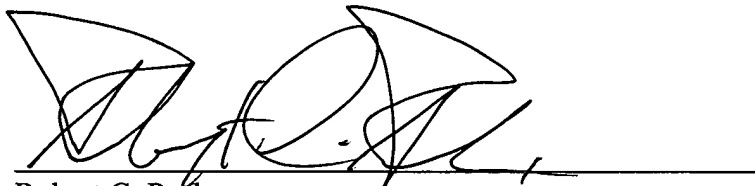
Claims 2-6, 8-12, 20, 22, 24, and 26 are dependent on independent claims 1, 7, 19, 21, 23, and 25, incorporating their limitations, respectively. Therefore, for at least the same reasons, claims 2-6, 8-12, 20, 22, 24, and 26 are patentable over Kane and Behnke, under § 103(a).

CONCLUSION

In view of the foregoing, reconsideration and allowance of claims 1-29 are solicited. Applicant submits that claims 1-29 are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present paper, the Examiner is kindly requested to contact the undersigned at (206) 407-1513. If any fees are due in connection with filing this paper, the Commissioner is authorized to charge the Deposit Account of Schwabe, Williamson and Wyatt, P.C., No. 50-0393.

Respectfully submitted,

SCHWABE, WILLIAMSON & WYATT, P.C.

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